

Appl. No. 10/619,698
Response dated October 26, 2005
Reply to Office Action of September 28, 2005

REMARKS

Applicants acknowledge receipt of the Office Action dated November 29, 2005, in which the Examiner rejected Claims 1-16 under 35 USC 102(b) as being anticipated by Hershkowitz et al. (US Patent 5,935,489) and also rejected Claims 17, 18 and 29-38 under 35 USC 103(a) as being unpatentable over Hershkowitz et al. (US Patent 5,935,489)

Applicants would like to take this opportunity to thank the Examiner for his time and effort expended to examine the present application and especially for providing a straight forward and concise explanation of the bases of rejection. Applicants will endeavor to be equally clear and straight forward pointing out the distinctions between the invention and the prior art and how those distinctions have been properly captured in the Claims as now presented. However, if the Examiner believes that Applicants have disclosed patentable subject matter, but have not properly captured the same by clear and concise claim language but such claim language is readily apparent to the Examiner, Applicants would greatly appreciate any and all additional help that the Examiner is able to provide. Please call the undersigned at the phone number provided so that this Application may be processed for prompt allowance.

Status of the Claims:

Claims 1-18 and 29-38 were considered by the Examiner.

Claims 19-28 were cancelled in a prior amendment.

Claims 1, 17, 18, 29 and 32 are currently amended.

Claim 39 is new.

Claims 1-18 and 29-39 are now pending for further examination.

Hershkowitz et al. (US Patent 5,935,489)

Hershkowitz 489 discloses a face-mix gas injector for mixing light hydrocarbons and an oxygen containing gas and feeding the same into a partial oxidation reaction zone. While Hershkowitz 489 and the present invention perform essentially the same function, they accomplish the function of mixing these gases in substantially different ways with substantially different

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effects. Specifically, Applicant has deliberately omitted the jet nozzles or cups that Hershkowitz 489 for mixing the gases prior to directing the mixed gases to reaction zone. The present invention brings the gases together in closely spaced outlets where the mixing takes place below the downstream face of the gas distributor. For comparison, Applicants downstream face is comparable to the face surface 13 of Hershkowitz 489. As set forth in several dependent claims, the outlets for both the first and second gases are directed towards the catalyst as shown in the drawings and described in the specification. In contrast, Hershkowitz 489 provides for the methane passages to direct methane at about right angles to the oxygen outlets as the two gases are fed to the jet nozzles. As described in the present invention, when the possibility exists for rapidly occurring undesirable side reactions, rapid movement of the gases from the gas distributor to the catalyst will provide better results. Mixing the gases in a jet nozzle and then directing the mixed gas passed the face surface and into the reaction zone would logically add time that might allow such undesirable reactions.

It is also recognized that Hershkowitz 489 discloses stacked plates, but it should be appreciated that the stacked plates in Hershkowitz 489 are generally parallel to the face surface wherein the stacked plates of the present invention extend from the inlet of the gas distributor to the outlet. Structurally, the plates of Hershkowitz 489 are made with interconnecting boreholes therein which are aligned with boreholes and slots in adjacent plates to form the jet nozzles and gas passages leading to the jet nozzles. The plates of the present invention are, for at least the most part, parallel to the path that the gases travel through the gas distributor and are therefore not provided with boreholes. It is the plates of the present invention that keep the gases from mixing until the gases exit the distributor and enter the chamber to mix.

The claims have now be amended to more clearly distinguish over Hershkowitz 489 reciting the distinctions described above. In particular, in the specification of the present Application, there is described a chamber 240 between the downstream face of the gas distributor and the catalyst. It is in the chamber that the gases first come into contact and begin mixing. The claims have been amended to include a definition of the chamber and to recite that the first and second gases don't come into contact and mix until the gases enter the chamber. In Claim 29, the outlets for the first and second gases are set forth as oriented generally parallel with one another. In new Claim 39, the

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parallel outlet aspect is recited along with a recitation that the downstream face of the gas distributor is defined by downstream edges of a plurality of stacked plates that have their upstream edges at the opposite end of the flow channels from the outlets.

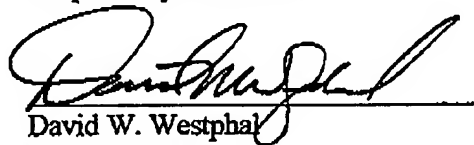
Conclusion

Applicants submit that with the amendments and discussion of the distinguishing features of the present invention that the Claims are now allowable over Hershkowitz 489 and all other prior art. Applicants don't intend to belabor its arguments and believe that what has been presented should be fully persuasive for allowability or should provide a basis for the Examiner to suggest critical language to put this application in condition for immediate allowance.

All amendments and claims are supported by the Application as originally filed and do not present any new matter.

Should any fees have been inadvertently omitted, or if any additional fees are required or have been overpaid, or in the event that an extension of time is necessary in order for this submission to be considered timely filed, the Commissioner is authorized to please appropriately charge or credit those fees to Deposit Account Number 16-1575 of ConocoPhillips Company, Houston, Texas and consider this a petition for any necessary extension of time.

Respectfully submitted,



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